AMENDMENTS TO THE CLAIMS

The claims in this listing will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. – 7. (Canceled)

8. (Previously Presented) Method for producing a radically coupled polytetrafluoroethylene polymer powder comprising at least one of radiation-chemically or plasma-chemically modified polytetrafluoroethylene powder including a surface, and homopolymers, copolymers or terpolymers radically coupled on the surface via a reaction in dispersion or in solid, comprising reacting polytetrafluoroethylene powder that is at least one of radiation-chemically or plasma-chemically modified and has reactive perfluoroalkyl-(peroxy) radical centers, in dispersion or solid with polymerizable olefinically unsaturated monomers to form homopolymers, copolymers or terpolymers radically coupled to the surface of the at least one of radiation-chemically or plasma-chemically modified polytetrafluoroethylene powder.

9. (Previously Presented) The method according to claim 8, wherein the polytetrafluoroethylene powder with reactive perfluoroalkyl-(peroxy) radical centers after at least one of radiation-chemical or plasma-chemical modification is subjected to a tempering at low temperatures.

10. (Previously Presented) The method according to claim 8, wherein the polytetrafluoroethylene powder comprises radiation-chemically modified polytetrafluoroethylene powder.

11. (Previously Presented) The method according to claim 8, wherein the polytetrafluoroethylene powder is radiation-chemically modified with a radiation dose greater than 50 kGy.

12. (Previously Presented) The method according to claim 8, wherein the polytetrafluoroethylene powder is radiation-chemically modified with a radiation dose greater than 100 kGy.

13. (Previously Presented) The method according to claim 8, wherein the polytetrafluoroethylene powder is radiation-chemically modified in presence of reactants to form the at least one of radiation-chemically or plasma-chemically modified polytetrafluoroethylene powder including a surface.

14. (Previously Presented) The method according to claim 8, wherein the polytetrafluoroethylene powder is radiation-chemically modified under influence of oxygen.

15. (Previously Presented) The method according to claim 8, wherein the polytetrafluoroethylene powder is a micropowder.

16. (Previously Presented) The method according to claim 8, wherein the reaction is performed in an autoclave or in a stirred tank or in an extruder/kneader.

17. (Previously Presented) The method according to claim 8 wherein the olefinically unsaturated monomers comprise at least one of styrene, acrylonitrile, maleic anhydride, acrylic acid, (meth-)methyl acrylate, vinyl acetate, glycidyl methacrylate or (meth-)acrylamide compounds.

18. (Previously Presented) The method according to claim 8 wherein the olefinically unsaturated monomers comprise a mixture of monomers.

19. (Previously Presented) The method according to claim 8, wherein the olefinically unsaturated monomers comprise at least one of macromeres or oligomers.

20. (Previously Presented) The method according to claim 8, wherein the polytetrafluoroethylene polymer powder includes functional groups which in subsequent reactions are reacted with other low-molecular, oligomeric and/or polymeric substances.

21. (Previously Presented) The method according to claim 19, further comprising incorporating the polytetrafluoroethylene polymer powder in plastics/polymers.

22. (Previously Presented) The method according to claim 20, wherein the polytetrafluoroethylene polymer powder is incorporated into at least one of elastomers, thermoplastics or thermosets.